



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

are small and wretched. Wheat will not ripen in these regions, and the only crops are of a seed called Tromba.

These people are snowed up for so long a time in winter that their flocks of sheep are small in number, it being difficult for them to feed any large number.

The wild animals are the Ibex, Stag, and Bear. The first of these is found in the wildest and most inaccessible parts of this region, and it is a most beautiful sight to see a herd of these animals going up the steep face of a hill, displacing the loose rocks as they go, which come tumbling about beneath them in every direction.

The remains of large moraines, now many miles from the termination of the existing glaciers, and also at the ends of lateral valleys, which at present have no glaciers at all, serve, I think, to show that the climate of this part of the world must formerly have been much colder than it is now.

The inhabitants of Wurdwān are in every respect identical with those of Kashmir.

IV.—*Notes in Persia, Khorassan, and Afghanistan.* By Captain
CLAUDE CLERK, F.R.G.S.

1. *Route from Tehrán to Herát, viâ Meshed and Toorbut-Sheik-Iam.*

THIS road, skirting the Salt Desert of Khorassan, lies immediately at the base of the lower ranges of the Elburz mountains. Here and there the road is crossed by spurs of these mountains. The road, after leaving Meshed, bears south and crosses the Afghan frontier somewhere near Koosan, but this frontier is by no means clearly defined ; the wandering tribes of Huzurehs and Timoorees, some of whom have settled in the villages about the frontier, bearing allegiance sometimes to Persia and sometimes to Herat.

Tehrán to Kabút Gúmbaz, 6½ h. r., 22¾ m.*

August 19th, 1857.—Left the city by the Shahabdooleazheem, or southern gate. Immediately on leaving the city, on the right, is an extensive burial-ground—road across open plain, in parts cultivated, and broken by embankments and cannauts :† the latter are seen in great numbers in the plain all round the

* H. R., Hours' ride. The time occupied in riding the distance, at a walk. M., Miles.

† These appear to the eye as a series of mounds of earth at a distance of about 50 yards apart. By means of a subterranean passage—the excavated earth being thrown up, forming these cannauts, resembling the burrowing of a mole—water is brought sometimes 5 and 6 miles across the plain. In this way but little evaporation takes place, and a stream thus conducted supplies a village for years, which would otherwise be dry in a few days.

city. At the distance of about an hour, the road, bearing south, passes through a large extent of enclosed gardens that surround the holy shrine of Shahabdo-lazheem. Water is abundant, and the gardens well cultivated: there is a small village here. On the left, adjoining the gardens, are the remains of some of the ancient ruins of Rhè (the ancient Rhaga): they are situated at the foot of an abrupt termination of a spur of the Elburz mountains; these ruins and mounds are to be traced through the village, and extend some distance into the plain. Leaving the village, the road, bearing E.S.E., winds along the base of some low, bare hills. On the right is an extensive level plain, stretching away as far as the eye can reach to the s. and s.w.: on it are seen many enclosed villages, and cultivation. There are several tracks or roads across the plain to Kubood Gumbuz: the one nearest the hills is much broken by watercourses, now dry. At distance of about four hours from Shahabdo-lazheem, pass on the left ruins of a village; a good stream of water here crosses the road; this and another are crossed two or three times before arriving at Kubood Gumbuz. A ruined village to the right of road; no inhabitants; shelter is found in a small caravanserai; latter part of road very stony; provisions obtainable in a small village distant about two miles from the serai.

Kabût Gúmbaz to Eiwanekif, 5½ H. R., 19 M.

About half a mile after leaving Gúmbaz, cross the bed of river Jajerood (in winter much swollen by melting of snow; current rapid, with masses of floating ice. Fraser, 20th Dec.). Water of this river finds its way by innumerable channels over the plain, many of them dammed off for irrigation purposes: the stony bed of this river extends about a mile and a half. This Jajerood river is lost in the plain of Vurameen: most of the channels contained water. Road beyond this good, bearing E. through level plain; thinly scattered over which is the camel-thorn and other low bushes; no villages or cultivation to be seen: two or three dry watercourses are crossed. At distance of about 4 hours on the right, distant some two miles, are some low rocky hills, named Kohe-nimuk: immediately on the left, parallel to the lofty Elburz, is a small range called Koh-Eilug. Gradual ascent to Eiwanekif, surrounded by large extent of walled-in fields and gardens; about 200 houses; water brackish (very). Village on bank of Zamarood; river-bed about 30 yards wide, now perfectly dry: fruit abundant.

Eiwanekif to Kishlak, 4½ H. R., 17 M.

For 1½ hours over open plain; a high mountain to the left front; hills on the right (a spur of the Elburz), close in on the road, and for half an hour by good road through a defile of the hills; these rise abruptly close to the road; parallel to the road a stream of salt water. For distance of 2 miles cross a small level plain surrounded on all sides by hills; in the centre are the ruins of a caravanserai. Then again entering a defile of the hills; this occupies half an hour, road good; the exit from this defile very narrow. In these defiles, called Sirdarah-dara,* the salt stream is crossed several times. These hills running in an easterly direction are a spur of the Elburz range; the road to the end of defile bears S.E., its length I should call about six miles. Enter upon a very extensive plain (the plain of Khar). Only to the s.e.†, a long distance off, are some low hills visible; bearing of road across this plain E.S.E.: at distance of about 4 hours road crosses a running stream of sweet water. On the right are some small villages, Husscinabad and Killanoo. Kishlak, a small village

* Gurdunee Sirdareh. This range of hills connected with the Elburz divide the plains of Veerameen and Khar.

† This is Craser's description of the river when he crossed it in the month of December.

of some 100 houses: water not very good; cultivation round the village. Post-house for travellers immediately without the village gate.

Kishlak to Deh-i-nimuk, 6 h.r., 21 m.

After leaving the village of Kishlak, the road, bearing E., is through the large plain of Khar; innumerable streams from the Julghoor Hills and Elburz mountains on the left cross the road, many of them 10 to 15 yards broad. Here in the vicinity of road no cultivation: at a distance of 3 hours, near the right side of road, large village of Aredan; about a mile from this a small village, Kadir (or Khar); beyond this the plain as far as the eye can reach, incrusted with salt, no vegetation to be seen. The mountains on the left approach to within 2 miles of the road. On the right, at a distance of 5 or 6 miles, some low sterile hills. None of this region is inhabited. The road good, crossing some dry watercourses coming from mountains on left; general bearing E. Deh-i-nimuk, caravanserai and post-house, and ruins of village: some little cultivation; water very brackish; no supplies. The villages on the borders of this salt desert fortified with high walls.

*Deh-i-nimuk to Lasjird, 7 h.r., 23 m.**

Road bearing E., over open plain. At a distance of about 3 hours' slight descent, road crossing a ravine, and round the base of a ruin of a fortified village (Goombuz-e-doozd, "the robber's dome," lit.): no water in this neighbourhood: soil incrusted with salt. At a distance of about three quarters of an hour road through the ruins of a village (Kheirabad): on the right is a sort of well that contained water, but owing to its disagreeable taste undrinkable. The road is excellent; two very deep ravines (first, the Yelpoorie river) are crossed by sound, well-built bridges; beyond these, crossing another ravine by bridge, arrive at distance of 6 hours at a running stream of fresh water that crosses the road; water has a strong mineral taste, but drinkable. Cross some low hills, and, ascending, arrive at village of Lashgird: the bearing of road E., good throughout, gradual ascent. Provisions and fruit in abundance.

Lasjird to Semnun, 5½ h.r. 18 m.

At a distance of about an hour from the village the road passes one of the fresh-water cisterns; they are often met with in this country; they are covered in with a dome-like roof, and at the side is a small entrance-door: near this is also a stream of good water. At a distance of 2 hours road passes through the village of Surghai (or Soorkhey), famous for its pomegranates and melons. The soil of this plain is very stony; the road, bearing N.E., covered with loose stones, keeps parallel to, and at a distance of about 2 miles from, the Elburz mountains. Plain, slightly undulating. At a distance of 4 hours, on the left, at the base of the mountains, is a small village: the road is crossed by numerous dry watercourses. At a distance of about a mile from Semnun one road branches off for the town; the other, bearing away to the left, skirts the town, passing amongst gardens and cultivation. Water is good and abundant, as also supplies: tobacco much cultivated.

Semnun to Ahooan, 6½ h.r., 22 m.

For the first 3 hours the road bearing N.E. over a stony plain, gradually rising towards a spur of the Elburz mountains; this is crossed by a bad stony road, little better in parts than a bridle-path; the road crosses a large vein of slate-rock; near the summit of the ascent is a spring of water, but the supply very meagre: the descent commences at a distance of 4 hours. At the foot cross the bed of a mountain stream† (it contained a pool of water on the road): pass

* This was a night-march, starting at 7 P.M. and arriving at 2 A.M.

† This they said was a cannaut. The spring must have been near.

through a hilly broken country ; at a distance of 5 hours pass the ruins of a caravanserai. The whole of this region of to-day's march appears to be totally uninhabited ; large masses of conglomerate rock overhang the road : the country appears wholly destitute of water. Ahooan, a caravanserai and post-house, situated in a small plain : a reservoir of rain-water ; good bread, but nothing else obtainable.

Ahooan to Kooshea, 5½ H. R., 20½ M.

Shortly after leaving the caravanserai a steep though short ascent ; this finishes the spur of the Elburz (the Gurdanee-Aheeyoon) entered upon yesterday. Descent to the plain of Damghan ; road stony, bearing generally N.E. and E. ; the spur left behind runs in a s.e. direction across the plain ; no water or cultivation to be seen : the whole of this region appears totally uninhabited. In the distance, looking in an easterly direction, Dowlutabad and Damghan can be distinguished. Kooshea, a caravanserai and post-house ; distant a quarter of a mile is an old caravanserai, partly in ruins : a fine stream of water from the Elburz, distant about 5 miles, flows by the place. Supplies are brought here for the use of travellers from a village distant about 5 miles.

Kooshea to Damghan (the ancient Hecatomplyon), 5½ H. R., 18 M.

The road, after leaving caravanserai, through open uncultivated plain. At distance of 2½ hours pass the ruins of two villages to the right and left of road ; cross stream of water ; a short way beyond this some eight villages are to be seen in the immediate vicinity to the right and left of road. On the right is the village of Dowlutabad, well planted with trees ; it is fortified with a triple line of wall and ditch ; a good stream of water flows across the road to this village : cultivation extends about a mile beyond this. The plain * then wears the same appearance as it did in the first part of march, barren and undulating ; a small bush is thinly scattered over it, affording but little pasture. General bearing of road, for the first part N.E., approaching Damghan E., covered with loose gravel and stones. Extensive ruins in the vicinity and town of Damghan ; through the town flows the river Cheshmalli, a stream with clear good water : gardens round the town.

Damghan to Deh-mollah, 6½ H. R., 22 M.

Leaving the post-house, which is situated outside, and facing the ancient citadel of the town, the road passes through the bazars of the town ; beyond these there are extensive ruins ; about half an hour from the post-house the last of these ruins, an ancient gateway, is passed through. The road beyond this very bad, the soil of clay, and in many places crossed by streams of water. At a distance of 2 hours pass on the left ruins of a village and fort called Tappa-Bukker ; at half an hour from this a small village on the left : general bearing of road E. by N. At rather more than 3 hours from Damghan a line of cannauts crosses the road, and lead to a village immediately on right of road called Mahmandost. The plain about here is covered with gravel, and a small bush is thinly scattered over it, affording but scanty pasture ; it is crossed by several lines of cannauts, coming from the base of the Elburz, and leading to villages in the plain : several are to be seen in this plain, which stretches away to S. and S.W. as far as the eye can reach. Pass on the left the village of Kadirabad ; cultivation to some extent round the villages : Deh-mollah, a village with ruins, and surrounded by gardens ; it lies to the right of main road.

Deh-mollah to Shahrood, 3½ H. R., 13 M.

Road over undulating barren plains, very stony and uneven, owing to the numerous watercourses that cross it—now all dry. Several small villages are

* Some five miles to the right across the plain several villages are to be seen.

seen on the right of the road ; water is conducted to them by means of long lines of cannauts, commencing at the foot of the Elburz mountains : but little verdure on the plain. Bearing of road N.E. : it gradually approaches the Elburz range, at foot of which is the town of Shahrood, surrounded by gardens and cultivation.

"From Shahrood there are two routes to Astrabad. The first, by Koashlook, is 18 fursuks ; it is the best road, though, owing to plundering bands of Turcomans, considered unsafe. The second is by Ziarut, 16 fursuks, very hilly and bad : the two roads join at a distance of about 30 miles from Shahrood. 2 miles, Shahrood side of Ziarut, difficult pass over the main range of the Elburz mountains in wet weather ; owing to soil, laden mules progress with difficulty : in dry, guns might be taken over it with labour."—(Conolly).

Astrabad about 70 miles in a direction N.N.W. from Shahrood.

*Shahrood to Meyo-meed, 13½ H. R., 39½ M. **

At a distance of an hour and a half, the road, being over an open plain, passes on the right the village of Budusht ; road crosses by a small stone bridge a stream of water that irrigates the gardens and fields around the village : at rather more than an hour from this pass the ruins of a village, Kyrabad, with water ; road good, bearing E. over open desert plains. At a distance of 3 hours from the ruins of the village just mentioned are the ruins of a caravanserai, and a reservoir of fresh water (we passed this after nightfall). The country beyond this becomes more hilly and some more ruins are passed on right of road ; the Meyo-meed mountains are seen to the right (the highest with large rounded summit) ; in the plain immediately at the foot of these, through which the road passes, are some small villages. The village of Meyo-meed, with high walls, caravan, and post-house, is situated at the foot of the round-topped mountain : a stream of water runs through the village ; water is brackish, and that in the reservoir is unfit for anything except washing, and scarcely for that.

This march is considered unsafe owing to the marauding tribes of Turcomans ; they frequently plunder caravans, and yearly carry off hundreds of men, women, and children to the slave markets of Khiva and Bokhara.

Meyo-meed to Meandusht, 7½ H. R., 22 M. †

The road at first across the plain at the foot of the Mai-o-mai hills. An hour distant from Meyo-meed pass on the left the village of Ibrahimabad ; cross a stream of water : an hour from this is Killa-zaidr, with a stream of good water. The hills on the right approach the road, and immediately after leaving the fort on the left the road enters them ; the hills § stony and thinly covered with bush : road, general bearing E. and E.S.E., in places stony ; no vestige of cultivation or water. Passing through these hills occupies rather more than 3 hours ; the road then enters an extensive barren plain. At a distance of about 1½ hours from the hills is the caravanserai of Meandusht ; water brackish, caravanserai || partially in ruins ; the water is obtained from a reservoir just outside the serai. This place must be some 500 feet higher than the plain of Meyo-meed. Supplies scanty.

* This stage we travelled at caravan pace, keeping with the baggage. The country about here not being considered safe, caravans are accompanied by a field-piece and an escort of horsemen. This was a night-march, starting about 5 p. m., and arriving 7 a. m. In the saddle, exclusive of stoppages, 13½ hours.

† Travelled with baggage and caravan.

‡ From this a road branches off to Dusgird to right of road.

§ These hills are said to be the haunt of plundering Turkoman tribes.

|| Close on the left of the serai is a small walled village, square, and bastions at angles. It contains about sixty dwellings.

"A caravan that had preceded ours had been plundered on this march by the Turcomans. Some large cases containing mirrors for the holy shrine at Meshed were lying broken, and contents smashed, by side of the road: the people with the caravan were for the greater part carried off for the slave-markets of Bokhara."—(*Journal*).

"The caravan we travelled with must have numbered at least 1000 souls. There were constant alarms of Turcomans, but we saw nothing of them."—(*Journal*).

*Meandusht to Abbasabad, 5½ H. R., 19½ M.**

For the first hour over a desert plain: the road then enters some low hills, similar to those of yesterday, bearing S.E.; generally speaking a good road, though in some places stony and covered deeply with a fine gravel. At a distance of rather less than 4 hours, pass on the right the walled village of Elhuk (or "Alhak," caravanserai); there is a stream of water here. After leaving this, at a distance of a mile and a half the road leaves the hills, and bearing E. strikes across a desert (salt) to the right, stretching away as far as the eye can reach. The village of Abbasabad is situated about 1½ hours from the hills passed through in the morning, and at the edge of the salt desert: water is good here, and there are some gardens. The village is built somewhat similar to that of Lesgird, and contains about sixty families. No corn of any kind appears to be cultivated in this region: the supplies for the village and travellers are brought from Subzawar and Muzenan.

Abbasabad to Muzenun, 6 H. R., 22 M.†

The road over open desert plain. At distance of 2 hours cross a stream, over which there is a brick bridge, called Pool Abreeshin: the ford is immediately to the right; water at this season in a pool only, no running stream. At half an hour from this to the village (fortified) of Sadirabad, stream of brackish water crosses the road: no cultivation. At about an hour from the village to the left of road a covered well containing water: the right of the road is a sea-like expanse of soil, thickly encrusted with salt; nothing to be seen upon it but a few bushes of the camel-thorn; it stretches away to the S. and S.E. without a break. A region entirely uninhabited till near Tubbes and Yezd. At distance of about 4 hours some low stony hills approach the road. At distance of 5 hours pass on the left a village with gardens; soon after this cultivation is to be seen on both sides of the road. On the left pass the enclosed village of Bahminabad, on the right Shawee: the road passes beyond these villages through the extensive ruins of Bahminabad, a small portion of which appears to be still inhabited; two or three small streams of water cross the road. Arrive at village of Muzenun on the right, with a serai, and ruins of an old one: water good; gardens and cultivation, though to no great extent: 150 houses.

Muzenun to Mēhir, 4½ H. R., 18 M.

The road bearing E. by S. across open barren plain. At distance of about 4 miles pass on the left the village of Donarzan (Daurzan), situated under the hills about 2 miles from the road. At 2 hours distant from Muzenun, pass on the left a covered well containing water (not very good); the road easy and good throughout: to the S.E. in the distance across the plain are seen a short range (one with sharp conical summit) of mountains; they are called the "Magheesa;" beyond these again a very high range, to be seen before sunrise. At distance of 3½ hours pass through the small village of Zoodkhar; around this cultivation. From this village one hour to Mēhir, across open plain: post-house and ruined serai, the latter distant some half-mile from village; gardens and cultivation.

* Half the distance travelled with caravan.

† One of the districts of Subzewar.

*Mēhir to Subzewan, 8 H. R., 30 M.**

The village of Mēhir lies about a mile to the left of the road : the serai is on the main road. Leaving the post-house, which is inside the village, by bridle-road for a mile to the main road, at distance of 2 hours a road branching off to the left goes to the village of Rehwund, and rejoins some 3 miles further on. At distance of 3 hours the road passes the fine serai of Rehwund, standing entirely by itself ; the village is some distance to the left : the road good throughout, bearing E., over slightly undulating barren plains (this was a night march). About an hour from the serai pass a stream of water, and near this a covered well. At distance of 7 hours on the left † are ruins—one large column, &c. ; also the village of Kusroogird : cultivation to some extent, several cotton-fields. One hour from this the town of Subzewan, surrounded by wall and dry ditch. Road latterly much cut up by watercourses, both dry and wet.

"The column on the left, passed in to-day's march, has inscriptions in the cuneiform character : the inhabitants, beyond calling it 'kudeem,' ancient, made no attempt at giving any sort of account of it."—(*Journal*).

Subzewan to Zafferoonie, 5 H. R., 20 M.

The road leaves the town by the E. gate, across level plain : pass by several villages (5) ; the principal one Nuzzeloobad (Nurzooloobad), distant 2 hours from Subzewan. Cultivation is to be seen round all these villages, and water seems abundant. At distance of about 4 hours on the left is a covered well : road excellent throughout. Bearing E., Zafferoonie, a small walled village with a little cultivation ; close to it is the ancient caravanserai of the same name ; ruins show it to have been a fine building : supplies scarce, water indifferent.

Zafferoonie to Shooreib, 4 H. R., 16 M.

For the first hour by a good road across level plain : pass on the right a ruined village ; from this gradual ascent, and at 2 hours' distance, pass on the right the village of Sung-Killeedar, with ruined caravanserai : the road immediately beyond this village enters the hills of the same name. On the left, following the course of the road for upwards of half a mile, is a fine clear stream of water (the road on the left bank). The hills about here present a bare and rocky appearance : the road stony and broken in places, owing to large stones and rocks that have fallen over it. At distance of 3 hours, of two roads, the right is taken to Shooreib. At distance of about 3½ hours there are some springs of water to left of road : the hills are here less stony, being covered with small bush and grass, and in a small valley to left of road a little cultivation is to be seen ; these hills have a general direction of N.W. and S.E. The road, latter part, is good, over alluvial soil. Descend to uneven broken plain, in which is situated the small village of Shooreib, with a little cultivation ; water good.

Shooreib to Nishapoer, 5½ H. R., 21 M.‡

The road for rather less than an hour stony ; crossing some low detached hills, enter an extensive level plain, and at distance of 2 hours pass on the left on the road the small village of Surdeh : the road good over clay soil and bearing E. At distance of rather less than 3½ hours pass on the left the ruined, and a short distance further on to the right of road the inhabited village of Hassan-

* Subzewan province, containing nine districts,—Subzewan, Muzzenoon, Kan, Keirrao, Zummend, Tubbus, and three called Koo-Meesh.

† A bed of a river crossed, now dry.

‡ This valley of Nishapoer has a breadth of from 15 to 20 miles. The province contains twelve districts,—Nishapoer, Durb-e-lauzee, Manzool, Revund, Zeghankoo, Baur-e-mandun, Durroud, Ishkabad, Belook-i-nau, and three others.

abad; cultivation about here. Beyond the village two ravines are crossed, one with steep banks; both were dry. Approaching Nishapoer, several villages and gardens are seen to the right and left of road. The plain in which the town is situated is fertile and well watered. The climate is spoken of as the finest in Khorassan; it is also celebrated for its fine fruits: contains about 3000 houses.

Nishapoer to Dahrood, 4½ H. R., 16 M.

Leaving the town by the eastern gate, the road passes over a plain covered with villages, gardens, and cultivation: the soil fertile, and well watered from the high bare hills that run parallel to the road and at a distance from 3 to 4 miles from it; they are called the Meerabee, and further on the Khaoul range. At a distance of about 3 hours a road branches off to the right; this is the road to Mushed viâ Kademgah and Sheriffabad: this road is the easiest, but some few miles longer than the one viâ Dahrood, which crosses the hills; the general bearing of the road to this point S.E. In the country about here fewer villages are seen, and the plain presents a sterile appearance compared to that just passed through: several dry watercourses with large beds are crossed. The road, covered with loose stones, bears E., and crosses some low hills at the foot of the Meerabee Mountains, and at the distance of about 4 miles arrives at Dahrood, situated at the foot and at the mouth of a gorge of the Meerabee. The village is surrounded by gardens; fruit of all kinds abounds. Dahrood is in the district of Nishapoer: this district, containing some 100 villages, returns a revenue of 40,000 tomauns yearly.

*Dahrood to Toorukbay, 7½ H. R., 22 M.**

The village of Dahrood is built in the gorge and on the slopes of the hills; it contains from 500 to 600 houses: some fine trees are seen in and about the village, the plane and beech principally. The road,† bearing N.E., ascends by the banks of a fine clear stream of water: for a distance of rather more than a mile gardens extend, also vineyards; beyond these the banks of the stream are thickly planted with the willow, poplar, beech, mostly pollarded, &c. The gorge gradually contracts, and from the road, which is covered with loose rocks and stones, the mountains on either side rise precipitously; many landslips from these large rocky masses have fallen across the road at different periods. At distance of 2 hours is a small ruined caravanserai; from this to the summit the ascent is very steep, occupying about half an hour: at the distance of rather more than an hour down the N.E. side is a small ruined serai. Slate rock abounds this side of the mountains, but rarely stratified with quartz (of which so much is seen in the Elwund): on this side in the hollows some small bushes and verdure are seen; on the Dahrood side the mountains are perfectly bare. At distance of about 2½ hours from the summit is an open spot on the banks of a fine stream of water, with trees; this is as nearly as possible half way between the summit and Turgoveh or Toorukbay. Beyond this the road crosses and recrosses the stream several times; the banks of the stream are planted with birch, beech, poplars, plane, &c.—some of fine growth: the road very bad, covered with loose rocks and stones, frequently lying over masses of rock, in which steps have been worn by the passing caravans. At distance of 2 hours from the open spot pass through the village of Jagherk: around this the gardens abound in fruit of all kinds; cultivation is also seen on the sides and in the valley. A short distance from this the road passes through the village of Auberan, and, ascending a small ridge on the left, descends into a narrow valley destitute of trees, but in which some cultivation is seen. Through gardens approach village of Toorukbay; water good, and fruit of all kind abundant.

* To the top of the pass of Dahrood 2½ hours' ride—about 8 miles.

† This road is, in winter, impassable, owing to the heavy drifts of snow in the gorge.

Toorukbay to Meshed, 3½ h. r., 12 m.

Passing through the enclosed gardens of the village, the road crosses the ridge on the left, leaving the fertile valley travelled through in yesterday's march on the right. Further down than Toorukbay is the village of Gulistan, built on the summit of a hill : * it lies about a mile to the right of the road. At distance of three quarters of an hour, the road, crossing a hilly barren tract of country, passes by a garden with trees and water : † just beyond this the road crosses the wide stony bed of a river; its current from right to left; a little water in the bed. At distance of about half a mile to right of road there appeared to be some sort of dam with lock built across the bed. Steep ascent up bank of river: from this the road descends and leaves these mountains, by a very bad stony bit of road; enter an extensive plain cultivated on both sides of road; numerous lines of cannauts stretch across the plain, in which several small villages and forts are seen. Road good, bearing e. Enter Meshed by western gate across dry ditch.

Mesched to Sungbust, 7½ h. r., 19 m.‡

Leaving by the Edgar gate (s.w.), the road, passing some burying-grounds and enclosed gardens, at a distance of about half a mile, enters an extensive plain, cultivated near the precincts of the town. To the left are several small towers § scattered over the plain; at distance of half an hour pass a covered well: on the right are the rocky sterile range || that bound this plain on the s. and w. At distance of three quarters of an hour is the walled village of Askeria; it contains a few inhabited houses and a well of water outside: at 2 miles distant from this are the ruins of a caravanserai and mosque; stream of good water. One mile to the left of road is the village of Tooruk: cultivation extending some distance into the plain. General bearing of road s., good. The hills on the right approach the road: beyond this the country, leaving the level plain of Meshed, enters a country undulating and barren. At distance of about 13 miles is a covered well with good water: road crossed by several large ravines and watercourses, all dry. On the right bank of a small stream is the village of Sungbust, containing some 10 or 12 houses; there is a well containing good water, that in the stream is brackish (animals drink it).

"The gates of the village were shut, and we were warned off, as the inhabitants were suffering from cholera."—(*Journal*).

Hard frost during the night, with a keen cutting wind (29th September).

Sungbust to Feriman, 8 h. r., 18 m.¶

Road bearing s.e. through an undulating barren country. On the right a range of rocky mountains, a continuation of those that bound the Meshed plain: road good throughout. At distance of about 13 miles on the right are ruins of a village, there are also some ruined cannauts. No water to be found in any part of to-day's march (a dry river-bed crosses the road and runs parallel to it

* Boiling-point of water 206° deg.

† "In this neighbourhood, on both sides of the road, numerous camps were seen: they belonged to portions of that force that had been withdrawn from Herat a week or so previous to our arrival. Numbers were daily dying of cholera."—(*Journal*).

‡ This march travelled with camels, keeping with them throughout, pace averaging little more than two miles an hour.

§ These towers are built as a protection against the Turcomans: they have a small hole at the base, allowing one man only at a time to enter.

|| They have no name—the villagers calling them by the name of the villages near.

¶ Camels took eight hours.

the first 2 or 3 miles). At distance of 3 miles * from Feriman enter upon a perfectly level extensive plain, bounded by some high rocky mountains on the south and west. Feriman, a village containing 300 to 400 families: water good, a little cultivation, supplies obtainable. (30th September.—Water froze here before sunrise on being thrown on the ground: in our basins, outside tent, ice a quarter of an inch thick).

Feriman to Boordoo, 10½ H. R., 23 M.

Road bearing due E. across same level plain entered yesterday, turning abruptly s., approaches the small village of Kalunderabad (distant about 8 miles from Feriman) at the foot of the mountains: cultivation and gardens. The road beyond this bears s.e. across an undulating barren country: half way from Kalunderabad to Boordoo a small stream of water crosses the road; the mountains on the right are thinly covered with wood; cross several high ridges; road stony and broken. Cross large dry bed of river; on opposite bank the small fortified village of Boordoo: water good; a little cultivation around the village; supplies scarce.

Boordoo to Mahmoodabad, 8½ H. R., 18 M.

Over undulating plain; road stony, bearing s.e. About 7 miles to small village of Abdoolabad; gardens and cultivation, good water. Beyond this the plain level; it has an average width of about 10 miles, bearing s.e.; a few ruined villages are seen scattered over it. On the left, at distance of about 5 miles, is the now ruined village of Kyrabad (formerly the road passed through this village); it has been plundered, and lands laid waste, by Turcomans. Road passes through the extensive ruins of Shair-Linga, occupying some 4 or 5 square miles: the modern village of Linga is immediately on left of road. About half a mile from this, Mahmoodabad, on left bank of a fine stream: broad bed and high precipitous banks. Supplies scarce.

Mahmoodabad to Toorbut-Sheik-jam, 6 H. R., 13 M.

Road bears s., skirting some low hills on the right: plain perfectly barren and stony. On the left, at distance of 3 or 4 miles, is the river on which Mahmoodabad is situated: before arriving at Toorbut the water is drawn off for the purpose of irrigation: the bed, distant from Toorbut about 2 miles, is perfectly dry. Toorbut has several gardens, and there is some extent of cultivation; it contains about 200 houses. There is a handsome mosque here, in ruins.

Toorbut to Kareez, 13 H. R., 30 M.

By level road across open plains, bearing s.e. At distance of 8 miles pass on the left a covered well, containing water: rather more than half way is the ruined village and serai of Abbasabad; no water here. The road, beyond this good, crosses the dry bed of a river, the Mosinabad, a tributary of the Herat River (for some distance the Mosinabad keeps to the left of road); cross a low ridge of bare hills, then over open plain to Kareez; little cultivation, contains 100 houses, water good: extensive ruined serai at back of village.

Kareez to Koosan, 9 H. R., 20½ M.

Open level plain, thinly covered with brush and shrub; clayey soil, which in wet weather is very deep and heavy. At distance of 3 hours ruined village of Dagheroon; 7 hours' distance, ruined serai and village of Kafirkilla. About a mile to the left from this village is the bed of the Herat river: wooded and jungly: water is found in some parts. Cross river, and about 2 miles along

* About four miles to right of road, under the mountains, is the village of Ahmedabad, with gardens and trees.

opposite bank is the village of Koosan. The greater part of the village is in ruins, as are also the wall and towers; some good gardens enclosed around the town: water good. Village contains about 200 families: many of the former inhabitants taken into slavery by the Turcomans.

Koosan to Ghorian, 10 h. r., 25 m.

Road, skirting some low bare hills, follows at first the course of the Herat river: in the bed are trees and jungle. At distance of 4 miles ruined serai of Teerpool, near which is a ruined bridge over the river: at distance of about 11 miles the road, crossing a hilly bare country, passes the ruined village and serai of Shubbus. Beyond this the road leaves valley of river (which here makes a large bend to the south), and crossing a plain, eventually passes over to the other bank of river, which here has a good stream of water. Village of Zunghee-Sawar: beyond this cross extensive level plain, and at a distance of about 6 miles is the town of Ghorian, with gardens. Plain extensively cultivated, and several forts are to be seen scattered over the surface.

The old part of Ghorian is passed on the left; now in ruins. The whole of the rich country around this had been laid waste by the Persian Sirbaz (troops).

Ghorian to Zindajan, 5½ h. r., 12½ m.

Road across level plains, bearing E.; country well watered and extensively cultivated. To the left of the road is the populous village of Bernabad: this village is on right bank of river (Herat). The country intersected by large and deep watercourses. Zindajan, a village surrounded by a high wall, gardens, and fine vineyards; contains about 1000 houses.

Zindajan to Herát, 23 m.

The road bearing E. across a plain irrigated by large watercourses. Several villages are seen from the road; around them the land well and extensively cultivated. At a distance of about an hour the plain is somewhat broken, and the distance from the mountains on the right to those on the left is about 12 miles. At distance of about 9 miles cross the Herat river* to right bank: the stream here has a current of about 4 miles an hour, and at this season is about 3 to 4 feet deep. At distance of 2 miles from the river, small walled village of Sungbust: distant an hour from this is the village of Killa Eedgar; water abundant. The mountains on the right end abruptly: not far from this is the small village of Abjeel, to the right of road. Numerous canals irrigate the country, some of them deep, and crossed by narrow unsafe bridges. At distance of about 5 miles from Abjeel cross a large stream coming from the right; this flows into the Herat river a little below Sungbust: a large village, Nookra, is passed on the left. The road, a good deal cut up and broken by cultivation, enters the suburbs of the town: gardens enclosed by high walls; at about 300 yards from the southern gate an enclosure with mosque. Enter by Trak gate.

"Arrived second week in October."

2. Route from Herát to Shahrood, viâ Khaff and Toorsheez.

This road leaves the Herát Valley at Ghorian, and then strikes into the Salt Desert of Khorassan. Owing to the great scarcity of provisions and water, and also from the country through which it

* The bed of the river has low jungle of camel-thorn and tamarisk.

passes being considered very unsafe, owing to plundering Turcomans, it is a road very little travelled. The inhabitants of the few villages we passed through appeared to have no recollection of having seen Europeans. I believe this was Forster's route in 1783.

*Herát to Zindajan, 24 m., 13½ c. H.**

Road leaves Herat by Goortachak gate, and, passing by ruins of Masella, points straight to the hills for about a mile, then, turning abruptly to the w., skirts the hills that bound valley on the n. side. At 4 miles passed small village of Meerferoosh; 4 miles beyond this Killa Kashee; provisions scarce; road excellent over light gravel soil. The villages of Sak-Sulman and Shaloo-petree are passed on the left. About 8 miles from Kashee road crosses the Herirood to the left bank. Zindajan contains about 1000 houses; provisions of all kinds abundant. In winter the upper road, although a little longer, is preferable to the lower, which is across alluvial deep soil. A snow-storm detained us here a day.

To Ghorian, 13 m., 6 c. H.

Road and soil similar to that of yesterday, along the banks of river: distant some 2 or 3 miles to the right, extensive cultivation: the upper part of valley through which the road lies barren and uncultivated.

Ghorian to Hons-e-sung-dochter, 21 m., 9½ c. H.

The road leaving Ghorian crosses a small canal, the water in which is brought from the Herirood for irrigation purposes; the road then strikes in a north-westerly direction across an extensive plain, which for a distance of 5 or 6 miles bears the appearance of having been at some former period—some 4 years ago—under cultivation. The soil is of light gravel and sand, the road excellent; plain covered with small bush and shrub, and broken here and there by dry watercourses. At distance of about 14 miles, after slight ascent, enter some low, bare hills; road stony for about 3 miles through hills. An extensive barren plain then opens out, and crossing which arrive at a large stone well at a distance of about 4 miles from hills. On the left is a conical peak called Sung-e-Tochter; the water is good, and firewood abundant, but no building of any description affords shelter. About 2 miles short of Hons-e-dochter are some ruins and a well; the latter is also ruined, and holds no water. The water at our encamping-ground was rain-water, plentiful; it is said to remain throughout the summer sufficient for the few caravans that pass this road.

Sung-e-Dochter to Karat, 30 m., 14½ c. H.

Road over undulating plain; soil similar to that of yesterday. Some low, bare hills passed on the left shortly after leaving encamping-ground. These mark the frontier between the Herat and Persian territories. These are supposed to be a favourite haunt of the Turcomans. Beyond these the hills recede from road, and are at a distance of about 4 and 5 miles. At 11 miles arrive at some ruined wells; no water. About 2 miles on the right, near the hills, it is said there is a spring, but it is salt. "A party of marauding Turcomans crossed the plain some 4 miles to our front: our party gave chase, but it only resulted in the capture of one Turcoman, whose horse fell with him. The first of our Affghans who got up to him immediately stabbed him; the rest of the Turcomans, being well mounted, escaped, but not before they had

* c. H., Hours occupied by our camels from one stage to the other. Left Herát on 1st March, 1858.

found themselves obliged to abandon all the camels which they were driving off, and some of their spare horses. Both camels and horses were hamstrung before they abandoned them."—(*Journal.*) The plain about here broken and covered with bush and shrub. On the left are ruins of an old fort, distant some 2 miles from road : the soil of the plain is much encrusted with salt; and a few pools of rain-water passed here and there were so brackish that the cattle could not drink the water in them. At distance of about 28 miles arrive at the foot of some low hills. On the right is a minar of stone and arabesque ornaments. About 2 miles to the right is the ruined village of Karat, destroyed by Turcomans; the whole of inhabitants carried off. During the whole of to-day's march no water is obtainable, and no habitatfon of man is visible from road. The road enters the hills, crosses the dry bed of a mountain stream, on the bank of which is a ruined serai and well ; the latter contains no water. By stony road up the banks of bed ; at distance of 2 miles arrive at water ; firewood abundant ; ground confined for encampment.

Karat to Khaff, 24 m., 11 c. h.

Stony road through hills along banks of stream : in bed high grass and jungle ; water good and plentiful. At distance of about 6 miles pass a stone turret on left of road on summit of small hill. Snow still remained on northern side of banks and hills close to road. The wheel-tracks of guns, on their return from late siege of Herat, still visible in parts of road. 7 miles, highest point reached after gradual ascent. From here watershed to westward ; the road before reaching rather heavy owing to melted snow. At about 14 miles road debouches on extensive plain, with gradual descent to town of Khauff. Some distance on left a dark line of fir-trees conceals the village of Sungoon ; under the hills is Barobad ; near Khauff is Kargird. Khauff situated at foot of bare hills ; town walled, and with ditch and citadel ; water from cannauts in hills ; contains about 500 inhabited dwellings ; gives 200 men to serve in the army of Persia ; revenue about 500*t.* yearly ; governor a Timooree, by name of Hasson-Ali-Khan. About 5 miles short of Khauff the road is crossed by a fine stream of water coming from the hills on the right.

Khaff to Nassirabad, 23 m., 10½ c. h.

The gardens of Khaff extend some distance along left of road ; distance of 3 miles unfinished fort on left of road : beyond it, at the foot of the hills, inhabited village of Looj ; road crossed by line of ruined cannauts. At distance of 4 miles a good deal of cultivation on both sides of road, irrigated by a fine stream coming from mountains on the right ; these latter are some 4 or 5 miles N. of road., running in a direction nearly E. and w. On the right, lying some 3 or 4 miles under the mountains, are the villages of Gisht, Srab, and Poindar. At distance of 6 miles, *hous* (a covered well) with good water : the road bears w. across a plain thinly covered with bush ; soil of light sand and gravel. On the right are some low hills detached from the higher range behind : in these are the remains of an ancient dam confining the water of a stream. Near the dam village of Killa-nau, visible from road ; the plain here and there slightly encrusted with salt. At 10 miles pass another *hous* ; 4 miles beyond this, village of Salama, with double wall and ditch ; the ruins of a large town outside the present walls. Just beyond this village ancient ruin to left of road : cultivation extensive, in which are small forts and towers to protect the cultivators against attacks of Turcomans. The plain beyond Salama crossed (at this time of year, March) by several fine streams of good water : 4 miles from Salama road crossed by bed of river ; river fordable in all places. This river comes from mountains on the right, and by some called Seedee : road passes on the left small village of Furrabad, and arrives at Nassirabad, a fort with wall and ditch, containing some 300 houses.

Nassirabad to Sungoon, 27 m., 12½ c. h.

For 2 miles over alluvial soil to village of Chamunabad; on the road large houses with water; gardens and cultivation on both sides of road. 5 miles villages of Mehdeebad, Esau, Khanees. Extensive ruined town to right of road; beyond the village a good deal of cultivation. To Mehdeebad from Nassirabad soil alluvial and much encrusted with salt. 8 miles, village of Jelirabad: lines of cannauts run parallel to the road, and several others in different directions; beyond Jelirabad soil of light gravel and sand. 2 miles from Jelirabad small village of Mulka lying to left of road; from hence the road, crossing a well-cultivated plain, passes the small village of Hosseinabad on the right, and arrives at Kooshear, a large village, with extensive ruins around: village fortified with walls and ditch. This place about half-way of to-day's march, bearing in a N.W. direction across undulating plain; pass on left small hamlets of Assabad, Roodkhair, and Jafshirabad, the latter considered half-way between Kooshear and Sungoon: gradual ascent to Sungoon; road crossed by several streams of good water coming from the right. Sungoon, with wall and ditch, contains about 400 dwellings: citadel in ruins.

Sungoon to Zarmir, 28 m., 13 c. h.

By bridle-path across cultivation for a mile, bearing W. At 2½ miles cross river, 15 yards broad and 2 or 3 feet deep; contains water throughout the summer; named here Sungoon river; comes from a village to the N. called Zamal. From Sungoon there is another road to the left—the soil alluvial—whereas the one we took was of sand and gravel, and better for laden camels. 5 miles, arrive at Mahmoodabad, a small village with wall and ditch; from this the road, bearing N.W., approaches the hills that bound the plain on the N. 8 miles, village of Hindebad; road from this crosses undulating barren plain, bearing W. 12 miles; well with water; low, bare hills on both sides. From well a very gradual descent, and, bearing slightly N. of W., the road turns towards a high rocky range, now covered with snow, running E.N.E. and W.S.W. 14 miles, pass small villages of Killia-nou, Hosseinabad, and, further back, Zaffierabad. 15 miles, small covered well with rain-water: road crossed here by large beaten track from Turbut to Tubbes. 16 miles, to right of road, under the hills, small village of Kujdarach. 24 miles, cross broad bed of river with high steep banks: this river flows by Toorbut, and, after crossing road, waters the Mawalat valley, spoken of as being very fertile and highly cultivated; water in considerable volume, about 30 feet broad, and up to the horses' bellies: plain beyond this undulating, soil of sand and gravel. Zarmir, small village; provisions scarce.

Zarmir to Toorsheez, 26 m., 12½ c. h.

5 miles W., across plain to small village of Aliabad, nearly deserted, with strong walls and ditch. 2 miles from Zarmir cross a small river coming from hills on the right. 5½ miles, road crossed by mountain torrent, in summer said to contain no water, the banks steep and high: current very strong, the water a little above horses' knees. 9 miles, small covered well with water. On the right, at foot of the mountains, 4 miles from road, village of Askun. 12 miles, another small well with good water; cultivation on both sides of road; plain undulating, and soil of gravel. 19 miles, road crossed by stream, coming from the right: this marks the boundary between the districts of Khauff and Toorsheez, and irrigates a considerable portion of the latter; plain covered with ancient and modern lines of cannauts. Cultivation considerable approaching Toorsheez, passing on the left village of Fidavi. General bearing of to-day's march W.

"District of Toorsheez returns a revenue of 18,000*t.* (9000*L.*) yearly (probably exaggerated). The governor, Abbas Khan, is a Kajar—the name of the royal tribe."—(*Journal.*)

Toorsheez to Khalirabad, or Khaleelabad, 9 m., 4½ c. n.

Road bearing w., and inclining towards high rocky mountains (the same range that ran parallel to road in yesterday's march: this range called by some Koh-e-seed, by others Koh-e-sureh), passes through, at the distance of 3½ miles, small village of Dust Shanoo; beyond, through gardens and orchards enclosed by high mud walls, to the right, are two or three small hamlets and ruined remains of a village. 7½ miles, small walled village of Deh-e-non: three covered wells with rain-water on the road between this village and Toorsheez; road crossed by line of cannauts, and watercourse with steep banks. 9 miles, village of Khalirabad: on the right ruined walled village; the present inhabited one on the left contains some hundred dwellings; general bearing of road to-day w.; soil principally gravel and sand; cultivation to be seen on both sides of road throughout to-day's march. On the right, extending to the base of mountains* that bound the plain on the northern side, the plain has here a breadth of some 10 or 12 miles, and to the s. is bounded by sterile rocky mountains.

Kaleelabad to Auarbat, 23½ m., 9½ c. n.

The road through enclosed fields and gardens for ½ mile, then passes between the small villages of Masdeh and Sirmasdeh, and enters upon an extensive plain highly cultivated. 4 miles, road passes a water-mill, and is crossed by a stream of water coming from right: beyond this cultivation ceases. Lying to the left of road, and distant from it about ¼ mile, small village of Aghoor. 6½ miles, another water-mill and stream crosses road. 7 miles, river Sheeztraz crosses road; this rises in the Koh-e-sureh, with broad stony bed; water about 2 feet deep. On the left, about a mile from road, village of Kundoor, with gardens and cultivation. This village, with six others in this valley, and seventeen in the valley lying to the n. of the Koh-e-sureh, have been lately given by the Persian Government to Attaoollah-Khan Timooree: this man was formerly a resident in Herat: during the late siege he fled from the town and delivered himself up to the Persians. On these villages being given to him, he induced some 2000 of his tribe to leave the Herat valley and establish themselves here: the black tents of the Timoorees are to be seen scattered about this valley. 11 miles, Sheffieabad, passing a small village on the left: considerable extent of ground around Sheffieabad under cultivation; contains some 30 or 40 dwellings. To the right, under the hills, two villages are to be seen, distant some 4 or 5 miles; to the s.e. a range of mountains running e. and w., now completely covered with snow. 14½ miles, pass on right village of Kuddookun, and pass through Budruskun, beyond inhabited part of which is small fort, with well and ditch: immediately to left of road, 17 miles, Ibrahimabad; small village; extensive ruins around. 19½ miles, Bab-ool-hukm: near this some gardens and stream of water cross the road. Auarbat contains some 150 dwellings. The first part of to-day's march over alluvial soil; the latter soil of gravel and stony; bearing, w.n.w.

Auarbat to Cheshmah-Shah-Hassan, 24½ m., 11 c. n.

For 2 miles by gradual ascent to lower spurs of the Koh-e-sea; cross some low hills incrusted with salt. The road, after passing through these hills, and over some ravines with steep banks, lies across a plain covered with bush and shrub; a small fort visible to left, whether inhabited or not uncertain;

* These run parallel to the road, and are distant from it two or three miles.

gradual ascent to distance of 8 miles, thence descent ; and $8\frac{1}{2}$, a warm stream, slightly brackish, crosses the road : just below this, sandy bed of river, containing a small stream of brackish undrinkable water : the road crosses this and passes along the base of a scarped rocky mountain that here rises to the left abruptly from bank of river ; this range continues, recedes from road, and further on assumes larger dimensions, running s.w. and n.e. $11\frac{1}{2}$, a small patch of cultivation and two or three hovels by side of road called Hassanabad : hence the road continues over a hilly broken plain incrusted with salt, and on which no habitation of man is anywhere seen : to the right, a long distance off, are seen a portion of the Elburz ; this side is the fertile valley of Kamiseh. $22\frac{1}{2}$ miles, a small brackish stream called Jamool-Mookl : caravans sometimes stop here. $24\frac{1}{2}$ miles, another brackish, though drinkable stream ; encampment to right of road, 1 mile distant, at a spot called Cheshmah-Shah-Hassan. The ascent in to-day's march considerable, though gradual — I should say some 800 feet higher than last night's stage ; no village here or habitation of man.

Cheshmah-Shah-Hussan to Touroon, 31 m.

The road, over broken hilly plain, similar to that of yesterday. At distance of 7 miles a large pool of rain-water : around this some Timourees had pitched their tents ; they belonged to the nomads of the Herat territory. 15 miles, about a mile to left of road, at the foot of some white chalky-looking hills, a well of brackish water. At rather less than 16 miles road enters low stony hills, and continues for about $2\frac{1}{2}$ miles winding through them, then enters a desert hilly plain similar to the one passed through this morning. 26 miles, a line of cannauts, containing a little water, crosses the road. On the left is a large rocky mountain, Koo-e-touroon, at the base of which a few small villages are seen. Gradual ascent to Touroon : small village ; provisions scarce ; a fort on left, on a mamelon, overlooks village and gardens. Road throughout to-day's march over firm gravel soil, bearing n.w. ($8\frac{1}{2}$ hours in the saddle).

"The morning was so bitterly cold that we were all obliged to dismount and lead our horses."—(*Journal*, March).

Touroon to Zaughuda, 24 $\frac{1}{2}$ m., 11 c. h.

$2\frac{1}{2}$ miles across plain to small village of Chaumnabad, or Zaboonaab : has a little cultivation and small stream of water.* On the left, distant some 4 or 5 miles, base of large bluff mountain of Touroon, about which a few small villages are seen ; the plain beyond the village traversed in all directions by sand-hills and ridges. At 6 miles road passes between high rocky hills ; and at 10 miles pool of good water, on the right, from a ruined cannaut ; on left ruined walls of fort. $13\frac{1}{2}$ miles, road, crossing low gravelly hills and ridges, arrives at Beezamah : a stream of good water ; trees on left ; on right, a little further on, ruined fort ; a little cultivation, with a few inhabited dwellings ; the road for remainder of march through barren plain. Passing ruined walls of Magraa, gradual ascent to rocky hills, passing through a portion of which arrives at Zaughuda : a well of water to left of road ; a broad track to and from it ; water slightly brackish ; firewood abundant ; encamping-ground confined.

Zaughuda to Khanahoodee, 30 m., 13 $\frac{3}{4}$ c. h.

Road bearing w. across some hills entered yesterday : from these gradual descent to uneven rugged plain. 8 miles, cross the Kaul-murra ; water very brackish : same river that flows by Pool Abreshun ; here but little water ; said to go to Yezd. 12 miles, covered well with good water ; also called

* A high mountain covered with snow, one of the Elburz range, on the right, was called Towein.

Haus-Kaul-Murra. $17\frac{1}{2}$ miles, another well; water good. Chah-Koosh; from this across extensive plain thinly covered with bush and shrub: to the right, on the plain for some 2 or 3 miles, vegetation was visible; beyond it had the appearance of a desert sandy waste. $23\frac{1}{2}$ miles, road enters hills, after gradual ascent, and passes small well on left. $2\frac{1}{2}$ miles, through hills: leaving these, road bears s. for a short distance, passing the village of Gerdan on left. Beyond this village is another, *Ghivat*, under rocky hills; these run nearly n. and s.; the rest of way across stony plain. Khanahoodee, village of some 200 dwellings, with a little cultivation; water good.

From Khanahoodee a road joins the Teheran and Meshed road at Abbasabad. From Khanahoodee to Dustgird is 3 fursungs; from the latter place to Abbasabad is 6—these last 6 fursungs through a perfectly desert country void of water.

Khanahoodee to Bearjoon, 8 m., 4 c. h.

Road bearing n.w.w. across open, barren plain; for the first part stony, latterly fine gravel; but little vegetation, except camel-thorn, visible. The Mayo-meed hills are seen to the n.w. Bearjemund, a small village with gardens, and some extent of cultivation around.

The country between Ghorian and Bearjoon presents throughout the self-same never-varying features—barren, desolate plains broken by ranges of bare hills and mountains. No trees, except in the immediate vicinity of the villages, are anywhere seen. The vegetation, thinly scattered, consists of a dwarfy, resinous shrub and the camel-thorn. The soil for the greater part is fine gravel mixed with sand; but little granite and less quartz meets the eye; the more common formation of the rocky hills is of conglomerate stone. Marble is seen in large masses (a blue dark-coloured stone, sometimes also of a reddish hue streaked with quartz); there is also a great deal of a dark-coloured rock, in which copper is found, but in small quantities, and the mines which are said to exist are not worked.

Bearjoon to Goud-e-bang, 22 m., 13 c. h.

Road, leaving gardens of village, turns abruptly to left for a few hundred yards, then bears w. across an open plain, gradually ascending towards high rocky hills—one on the right called Koh-e-shutr, the other on left Koh-e-sockta (a continuation of those near Mayo-meed, which were visible). 9 miles, road enters hills, and passes Keekee, a ruined fort, with a well of good water. Hence, ascending and winding between hills thinly covered with bush, pass, at distance of $12\frac{1}{2}$ miles, a spring of good water; very small, and not enough to form a stream: beyond this, road by steep ascent to the highest point passed in these hills (13 miles highest point): this, I should say, is the highest point on the road between Herat and Shahrood; snow was visible on northern side of a hill close to the road, and vegetation was later here than in any place yet passed. From this gradual descent through hills, and then across barren plain to Goud-e-bang: deserted village; ruined walls, and well of water: no supplies: said to have been deserted a short time ago, the inhabitants fearing the Turcomans, who were reported to be at Mayo-meed.

*Goud-e-bang to Shahrood, 26 m.**

Road crossing open plain; at 5 miles enters hills. At about 6 miles, winding round base of high and rocky conical hill, passes a small spring of water, called Goolley-a-haranau, on the right; road beyond this stony, ascending and descending between bare hills. 13 miles, a well of water to the right, on bank of dry bed of mountain torrent, the course of which road follows for

* From Teheran to Herat, by this route, is called by the natives 180 fursuks; via Meshed, 207 fursuks.

some distance. $13\frac{1}{2}$ miles, road leaves hills, and, gradually descending, bearing N.W., crosses, by a wooden bridge, a small stream (the banks of this much incrusted with salt, though water is fair), about $\frac{1}{2}$ mile from village of Dehseech, surrounded by extensive orchards and vineyards : the road makes a great bend to left to pass through this village. $3\frac{1}{2}$ miles from this crossing valley in northerly direction to Shahrood. From Shahrood to Teheran, about 9 days' march, we pursued the same route by which we had gone in August.

The distance from Herat to Shahrood, *viâ* Khaff and Toorsheeze, is $414\frac{1}{2}$ miles ; the greater part of the road is good, though here and there stony amongst the hills, several low ranges of which are crossed. In winter, for laden camels, this route is preferable to any other : it is the shortest, and, the soil being of light gravel and firm throughout, the road keeps good notwithstanding heavy rain. During summer this would be a cruel route for any laden animal. Some of the stages are long ; forage is procurable only at the large villages, which are sometimes 50 and 60 miles distant from each other. Water is scarce even at this time of the year (March), and is in many of the wells brackish and bad. Camels are the only baggage-animals that can travel this route without the owners incurring heavy loss. Mules seldom or never are permitted by their owners to travel this road owing to the reasons above stated. There is not much traffic on this road at any time of the year. We met only one caravan throughout our journey ! In the plains of Khauff and Toorsheeze corn sufficient only for the consumption of the villages in those districts is grown ; none is exported. The only exports spoken of by the natives are a sort of plum and grapes, both of which are sent in the shape of preserved fruits to the capital, where they find a good market. Cotton, though in small quantities, is also exported ; which finds its way to Astrabad, where it is purchased by the Russian merchants. The imports to these districts consist of rice grown in the Mazanderan province, which here has a ready market ; for, owing to the great scarcity of water, no rice can be grown in the country. European cloths—printed calicos and such goods—are sent here from Teheran. None of the caravans from the E. (Herat, Caubool, Candahar) take this road ; they keep to the upper, *viâ* Meshed and Subzewar.

3. Route from Tehrân to Bushire, *viâ* Ispahan and Shiráz.

This road after leaving the valley of Shiráz descends upon Bushire from the high table-lands by a series of difficult precipitous mountain passes.

Tehrân to Kinaragird, $5\frac{1}{2}$ H. R., $20\frac{1}{2}$ M.*

April 18th.—Left by Shah Abdool Azeem gate, and passed through small suburb of town (from this the road to Meshed is on the left) ; the level plain beyond covered with walled gardens and villages. Several lines of cannauts and small streams cross the road, current from right to left. Some 2 miles to left of road is passed the Shah Abdool shrine, at the foot of rocky spur of Elburz, amid the ancient ruins of Rhages. At 7 miles, ruins of village and garden, close to left of road ; $9\frac{1}{2}$ miles, slight descent to small cluster of villages called Kareezuk, with gardens and cultivation. This plain is cut up by several deep ravines ; soil alluvial ; from Kareezuk by large beaten track bearing S. $11\frac{1}{2}$ miles, cross small stone bridge ; a short distance beyond this a ruined enclosure to right of road. 13 miles, road passes over a ridge of low gravelly hills. From this the ascent is gradual for a mile and a half, when the road enters a

* A village with about 30 or 35 houses. Water good—provisions moderate.

range of rocky hills; road good, and, ascending for 2 miles through hills, the highest point is reached: descent $1\frac{1}{2}$ mile through hills. The road then, across open plain, gradually descending to Kinaragird, on right bank of Kerritch river, which the road crosses by ford just before arriving at post-house.

Kinaragird to Hous-Sultan, $5\frac{1}{2}$ H. R., 21 m.

Half a mile by bad road, cut up by water, to Zecan, a small village of about a dozen houses. Beyond this road crosses marshy bed of river, by causeway and bridge. From this road, bearing a little w. of s., strikes across undulating desert plain, for the first part alluvial, latterly gravel and stones. 5 miles, a large stream coming from right is crossed. Immediately beyond this, short though steep ascent to small table-land. Country broken by small ridges and hills, many of which road lies over. 11 miles, ruined serai, with muddy pool of water. From this, by excellent road, cross desert to Hous-Sultan. Post-house; serai newly built; attached to latter a few houses. Before reaching Hous-Sultan, about a mile to the right, is an uninhabited fort. To the left, distant some 5 miles from road, a large salt-lake is seen. Brackish water from covered well; provisions scarce.

Hous-Sultan to Pool-e-dulak, $4\frac{1}{2}$ H. R., 18 m.

By good road leading s. across desert track of country, on which not a vestige of vegetation is visible. 12 miles, a caravanserai, in good repair, with covered well of water.

Sudrabad.—From this the road gradually ascends, and, at rather more than 2 miles from Sudrabad, enters low rocky hills. 16 miles, road, having passed above range of hills, descends upon Pool-e-dulak, a caravanserai and post-house, on left bank of Sawa river, which is here crossed by good brick bridge. Water at this time of year in considerable volume, though brackish and muddy; in summer quite dry. Supplies are brought here for caravans from Kúm.

Pool-e-dulak to Kúm, $3\frac{1}{2}$ H. R., 14 m.

Cross the Gonsir river by brick bridge, thence some 7 miles across barren desert plain, on which but little vegetation is visible. 7 miles, cultivation on left of road, extending to small village, distant about a mile from road. To the right, also, a small hamlet off the road; enter and pass through low bare hillocks and broken ground, with gradual ascent to left bank of Kúm river. Cultivation extends some distance to the right; post-house and serai on bank of river, opposite a brick bridge. Supplies of corn and provisions here abundant.

Kúm to Pasengan, $3\frac{3}{4}$ H. R., $14\frac{1}{2}$ m.

The road leaving post-house crosses the Kúm river by good bridge, and enters the town, through the bazaars of which it continues for rather more than a mile. From the town, road bears in a south-easterly direction across a highly cultivated alluvial plain on the right; distant some 3 miles is a range of sterile hills, with rocky peaks; behind these, again, is a high range of mountains, with snow on the summits (April). Cultivation extends some 7 or 8 miles along the base of above hills. $8\frac{1}{2}$ miles on left, small village of Khorabad; ruins and cultivation around. From this across barren plain, passing, at a distance of 12 miles, ruined walls of village Pasengan, with post-house and serai.

Pasengan to Sin-Sin, $5\frac{1}{2}$ H. R. 21 m.

For about 6 miles across stony plain, bearing s.e. Here the road passes along the base of a rocky perpendicular-sided hill on the right. On the left a few detached hills break the surface of the plain. At 10 miles (the rocky

range to the right approaching nearer the road), cross the broad bed of a mountain-stream, in which there was a little water. On the right bank of this stream, immediately on the right of road, is the small village and serai of Shooreab, with a stream of clear sweet water on left. From this, road bears s., crossing a hilly broken country (a spur from the range which has been parallel to road since leaving Kúm). 14 miles, the small village^{*} of Bag-e-Shah. 16 miles, road leaves the hills, which here terminate in the plain; a mile or so to left, and passing some cultivation and ruins (Deh-Annar), descends across stony plain to Sin-Sin, a small village with post-house and serai; good water. Demuevend bears from here N.N.E. Teheran, 3 or 4 points E. of N.

Sin-Sin to Kashan, 4½ H. R., 20 M.

The road bears slightly E. of s. across a plain entirely devoid of vegetation. 7 miles, pass the small village of Kasimabad. 10 miles, Nusserabad, with good caravanserai on left of road. 13 miles, the village of Alyabad on left; on right, ruins amid cultivation. Running parallel to road, some 3 or 4 miles to the right, is the same range as yesterday. Along the base are several small villages; the plain covered in all directions with cannauts. Enter Kashan by road rudely paved with stones; a considerable town, celebrated for its silk manufactures.

Kashan to Kohrood, 6¼ H. R., 22 M.

For rather more than a mile the road keeps along the ditch which surrounds the town. Debouching into the plain, through cultivation, it passes some two or three enclosed gardens to the left; beyond these the plain is stony and barren, and, for the most part, undulating. At distance of 5½ miles pass a ruined village, and cross a stream coming from mountains on right. At 8 miles another stream is crossed. 12 miles, the road, which so far has borne s., bears away to the s.w., and ascends towards the mountains. 14½ miles, the caravanserai of Gueberabad. From this road descends to banks of mountain torrent, whose course it follows, crossing it several times; the road is stony and bad, with constant ascent. 18½ miles, the road by steep stony ascent along the face of scarped hill; the gorge is in many places confined; overhung by rocky bare precipices. 18½ miles, the bund (a large dam, built by Shah Abbas) confining the waters of stream is reached. On the left, a tank, about a quarter of a mile long, of clear water. Beyond this the gorge widens, cultivation commences, the road winding between gardens and orchards till it reaches village of Kohrood. Contains some 300 houses, built one above the other on side of stony bare hill.

The heights on either side of this pass are rocky and precipitous, and could not be crowned without heavy loss if held by an enemy. They approach in many places to within 200 and 300 yards of each other. The village and gardens of Kohrood would in themselves be a strong position to force. The village, built on slope of rocky hill, completely commands the road towards Isphahan.

Kohrood to Beedushk, 5½ H. R., 24½ M.

By winding road, with continual ascent. At a distance of 5 miles the gorge, turning E., is abruptly closed. The road crosses the ridge by very steep ascent, occupying less than a quarter of an hour. Snow lay in the clefts of ridge (April 27th). From this continued descent for about 8 miles, passing on right, at distance of about 10 miles, the village of Merawund, apparently ruined, occupied now by a few families of *Eliauts* (*nomads*). The mountains here are rocky and barren; only in the hollows, along the banks of small streams and melted snows, is verdure to be seen. Before descending into small valley of Soo many ridges and undulations are crossed. Soo distant 20 miles. Two small villages on right, with considerable cultivation around. Water

abundant. $4\frac{1}{2}$ from Soo, road, passing large enclosed garden on left, arrives at Beedushk, a small village, with some 30 houses and cultivation; post-house. This village lies half a mile to left of road.

Beedushk to Moorche kar, $4\frac{3}{4}$ H. R., $20\frac{1}{2}$ M.

Leaving village and descending by bad road, at distance of more than a mile fall into the large caravan-road on right. At distance of 2 miles pass on right small village of Dah-loor. From this by excellent road, with gradual descents, across extensive plain, thinly covered with bush. At distance of 10 miles pass on right ruined serai (Adumabad) and deserted post-house. Approaching Moorche kar, a cannaut stream from right is crossed, and mud-built ruins surrounded by cultivation are passed. The plain is bounded to the s. by high chain of mountains running E. and w.

Moorche kar to Ispahan, 6 H. R., 30 M.

By good road across open plain. At $5\frac{1}{2}$ miles pass the caravanserai of Madar-Shah, a very fine building, now falling to ruin. Beyond this, road, with slight ascent, passes between some low hills. At 10 miles, deserted guard-house. 11 miles, the ruined serai of Aganeer: the high rocky range that bounds the plain on the E. are distant from the road and parallel to it some 6 miles. To the left one or two villages are seen, and one on right under hills. 21 miles, the caravanserai of Gez, an extensive building. The road for about 17 miles is over a light gravel soil, and very firm. Hence to Ispahan, soil alluvial, slightly encrusted with salt. From Guz to Ispahan through cultivated plains. Road crossed by numerous streams of water. The mountains on the right recede, and, forming a basin, sweep round, and then, taking an easterly direction, confine the town on southern side. Distance by our route from Tehrán to Ispahan 226 miles.

*Ispahan (viâ Julfa) to Mayar, $5\frac{3}{4}$ H. R., 25 M.**

Cross the Zenderood by Ali-Werdi-Khan bridge, and, passing through a few fields of cultivation, enter the suburb of Julfa, situated about 2 miles s.w. of town, and extending along some 2 miles distant from base of rocky precipitous mountains.

Leaving Julfa, and passing through several ruined gardens and walls, the road ascends gradually towards a break in the mountains; at a distance of $3\frac{1}{2}$ miles the highest ridge passed; hence, winding among low bare hills for about a mile, descends gradually, and good road to Margh in the plain: a ruined serai, with well and tank of water. Soil about here of clay, and encrusted here and there with salt. To this from Ispahan there is a more direct road, crossing the Khajoo-bridge, and leaving Julfa on the right: this is the post-road—the best and shortest, about 9 miles direct to Margh. Serai distant from Julfa 9 miles; a few supplies obtainable. From serai road bears s.e. across light gravel soil, and at 14 miles enters hills; the mountains on both sides rocky and precipitous, lying a little off the road: a short, though very difficult, ascent is passed. Road lies across and over a mass of rock, in which rude steps are cut. Beyond this road good, passing on left a covered well with water. 16 miles, road leaves hills and descends into extensive level plain. To the right rear, distant some 6 or 7 miles, a portion of the fertile valley of Sinjoon is seen; on left, receding from road, the precipitous rocky chain continue. 19 miles, ruined serai. 23 miles, situated at foot of hills on left, ruined village (by some called ruins of Mayar); the road, slightly ascending, passes round foot of hills on left, and descends to Mayar. A little cultivation around.

* Distance and time taken from outer gate of Julfa.—Julfa, the Armenian suburb of Ispahan.

Mayar to Koomeshah, 3 $\frac{3}{4}$ H. R., 18 M.

Passing through the extensive ruins of Mayar, road crosses a level uncultivated plain, bounded on all sides by rugged mountains. 7½ miles, a small guard-house (unoccupied), and a little beyond it enclosed garden and Imaumzadeh of Shah Sidda Ali, with fine stream of water. 3 miles further on, cultivation extending to village of Ispay, situated about 2 miles to left of road; beyond which, again, is the village of Munshoorabad. The road here slightly ascends, following along base of rocky chain of mountains on right. 13 miles, a small round tower on right of road. Road, bearing a little w. of s., approaches the entrance to the valley of Koomeshah. This entrance some 3 miles broad; at either end precipitous rocky mountains rise abruptly. The road, passing through cultivation, enters village of Shah-Reza; on right a fine enclosed garden, in which is the Imaumzadeh of the same name. About 2 miles from this Koomeshah, amid cultivation, a walled town, containing some 600 houses. Road throughout march good to Shah-Reza. Soil of gravel; from that village alluvial. Supplies of all kinds abundant.

*Koomeshah to Aminabad, 3 $\frac{1}{4}$ * H. R., 26 M.*

For a few hundred yards road bears E. towards rocky mountains (these end abruptly about a mile to the E. of village), and, crossing a deep ravine by brick bridge, keeps along the banks for a short distance; thence along base of mountains on left bearing s. These bound the valley on the eastern side; further on recede some 2 or 3 miles from road. 5 miles, ruined walls by side of road. 8 miles, garden, with stream of water. 13 miles, the village of Ooshaira (or Kooshaira), half a mile to right of road: here is the post-house. Rather less than 15 miles, road passes through the Maksood Begi, with ruined serai. Provisions here said to be scarce. From this village, road lies across a level gravelly plain, covered with small bush and tufts of grass; to the right several villages are seen scattered over the plain, and along base of mountains that bound plain on western side: the largest of the latter, seen from Maksood Heggi, is Isparjoon. This plain of Koomeshah must be upwards of 50 miles long, and an average breadth of 16. It contains some 40 mud-walled villages, around which, for a short distance, cultivation extends.

Aminabad to Shulgistan, 6 $\frac{1}{2}$ H. R., 32 M.

Road bearing s. across plain similar to that of yesterday. About 4 miles a deserted guard-house is passed. A little short of this a road turns off to the left. This is the shortest road to Shulgistan, and shorter than the one we came by by some 7 or 8 miles (we missed the road in the dark). 9 miles, road passes round the base of conical-shaped hill, detached by a short space from the chain that bounds the valley on the western side. 11 miles, village of Yezdi-Kast. The village, built on a large mass of rock rebutting into valley, is lofty and of singular construction (similar to that of Lasgird); contains some 300 houses. Road winds round base bearing E., and, descending into the small valley† of Yezdi-Kast river, passes post-house, crosses river by brick bridge, near which is a caravanserai, and, keeping for a few hundred yards along right bank, ascends, by steep rocky‡ bit of road, to the level of plain same as before. The valley or plain here contracts, having an average breadth of about 10 to 12 miles. No villages or cultivation to be seen till

* 3 hours 5 min.

† This valley, or large ravine, which is highly cultivated, has a breadth of from $\frac{1}{2}$ to $\frac{3}{4}$ of a mile; its sides are perpendicular, the level of the valley being some 60 to 80 feet below that of plain.

‡ Distance 12 $\frac{3}{4}$ miles.

approaching Shulgistan, small village of 50 houses. Water from cannauts. This river is called also Malwun, Malwoon river: it rises some 4 fursuks from the village, and is lost in the plain.

Shulgistan to Abadeh, 4 h. r., 21 m.

By good road bearing a little E. of S. across plain similar to that of yesterday. It has here a breadth of from 10 to 12 miles. To the S.W. a high rocky range, with snow on the summits (by some called Kooh-Bool); distant some 20 or 30 miles from road. At distance of 11 miles to right of road, under hills, the village of Chookoo; approaching Abadeh, distant 4 miles, cross stream of water, and pass ruined walls; hence, through cultivation, to Abadeh; walled village; no serai or post-house. Water good from cannauts. Provisions abundant.

Abadeh to Soornia, 3 h. r., 14 m.

By good road through same plain as yesterday, which here presents a highly cultivated appearance. 2 miles, small walled village, amid gardens; on left several enclosed gardens are seen scattered over surface of plain. 6 miles, through ruins, and pass a small hamlet. 8 miles to the right, under hills, large village of Chenar. At foot of the mountains the rocky snowy range seen yesterday to the S.W., distant from road * 8 to 10 miles, here bounds the plain to the W. It sweeps round a few miles beyond Soornia to the E., so closing the plain of Koomeshah to the S., and joining those that bound it on the W. General bearing of road a few points E. of S. Soornia village, with extensive cultivation. On approaching, a very ancient ruin is passed on left (by some said to be a fire-temple; others, one of seven that were built by Beiram Goor).

Soornia to Khan-Khoora, 4½ h. r., 23 m.

Gradual ascent after leaving valley, road bearing S. across same plain as yesterday. About 5 miles, the mountains on the right and left close in on the road. The valley here contracts, and has a breadth of about 2 miles. Rocky detached hills are passed on both sides. The road, still keeping very good and broad, follows along base of rugged mountain on left. A small village at the base of mountains on right is seen. 16 miles, the mountains on both sides recede, and the valley widens into an undulating plain of some 12 miles in breadth, covered with small bush and shrub; one or two dry beds of streams are crossed. No water seen or passed in to-day's march. Khan-Khoora post-house and serai. Small spring of water. No provisions procurable. On the mountains to the right snow was visible at a height of some 400 feet above level of plain (May 9th).

Khan-Khoora to Deh-beed, 3½ h. r., 18 m.

Across undulating plain same as yesterday for about 4 miles, with gradual ascent, and by good road over stony soil. Here, entering low rounded hills, covered with small shrub, the road winds, with gradual ascent, along banks of small stream. At 7 miles ascend to top of highest ridge; in a hollow close to road snow was visible (May 10th). Hence, the country assumes the appearance of a much undulating plain (to the right rear a conical rocky peak, distant some 5 miles, is seen), gradually descending over which road arrives at Deh-beed—a ruined serai and post-house amid cultivation. These lands are cultivated by people from small villages distant some 2 or 3 miles. Ruins of an ancient fire-temple. Moderate supply of water from small streams. Vegetation very backward. About 12 miles in a westerly direction the people speak of a small lake near the villages of Rufter and Nazinabad.

* Gekleed and Keeleed are two villages that lie to the right of road, hidden behind a spur from this range.

To-day's march would in itself present no difficulties to troops marching ; but, supposing the country to be in the hands of an enemy, the low hills spoken of would require to be cleared before the advance of the main body, for in many places they completely command the road. Water and provisions are scarce. For our small party we were obliged to carry 2 days' provisions from Soornia.

Deh-beed to Moorghaub, 5½ H. R., 26 M.*

At Deh-beed the post-house is 200 or 300 yards to right of road. A foot-path from it, through cultivation, leads around base of an ancient fire-temple to main road. Hence, gradually ascending and bearing s., passes between low hills. 3½ miles descent across hilly country. 5½ descending to level of much undulating stony plain strikes s. across it. In one or two hollows are small streams of water and a little cultivation, belonging to Eliauts, a few of whose tents are seen. 14 miles, a ruined serai on left bank of small river (current from right to left, and said to come from Khan-Khoora). To the left of serai small valley, extensively cultivated ; ford easy, with low sloping banks. Hence road, at 15½ miles, turns into a gorge of the mountains, and, by steep stony ascent, arrives at a comparatively open space, and crosses dry bed of mountain torrent, keeping along right bank of which makes another steep ascent (the road here has been cleared, and is very fair) across a high ridge, the top of which is about 19 miles. Hence descent, and cross small valley, with dry bed of stream on left. Another steep and very rocky ascent (21 miles). Gradual descent commences by stony road, winding under high rocky mountains thinly covered with small trees and bush. Of two roads the left is taken (the right goes to Killa-nou), and about a mile beyond this a fine spring of water on left of road, which forms below a small pond : it runs on a considerable stream, and waters village of Kadirabad, visible to left. Road crosses stream, and descends to Moorghaub. 80 houses. Provisions scarce.

From Deh-beed to foot of mountains is 3 hours. Road easy, though in places somewhat stony. 2½ hours through the mountains, during which there are three steep ascents ; road very difficult, on account of large masses of rock and stone that lie upon it. The mountains on right and left command the road to within 2 or 3 miles of Moorghaub : water abundant in the mountains. This would be a difficult and arduous march to an army at all times. Were the mountains and commanding points in the hands of an active enemy, considerable opposition would have to be met, besides the natural difficulties of the road : some hours' labour would make the road quite practicable for guns.

Moorghaub to Sivend,† 7 H. R., 32 M.

By bad road, through irrigated lands, bearing s.w., then over undulating hilly country. At 3 miles strike into large road (left yesterday to the right), here bearing due n. and s. 5 miles, Eliaut village, in small plain of Deh-nou. The Eliauts are nomad tribes. Road winds round base of wooded hill, and passes through the plain, which has remains of ancient ruins. At 8 miles, arrive small deserted village of Mader-i-Soleiman (Cyrus' tomb). 8½ miles, road, crossing small stream from right and bearing nearly w., enters gorge of mountains ; immediately on left is the River Poolwar. Road keeps on right bank ; ancient roadway cut along the face of a precipice ; passes inaccessible ; rocky heights are on both sides of road. 11 miles, gorge opens, and road keeps along an alluvial small valley, in which wood is thinly scattered, as also in bed of river ; mountains recede, and road crosses a small plain, some 5 or 6 miles long, that has the appearance of having once been a lake. River and

* Three hours to foot of mountains, 2½ through mountains.

† Encampment on left bank of river at watermill below Sewund, and a mile beyond it.

road both find an exit from it by bearing s. and again entering mountains. 19 miles, road debouches into a broad valley (running nearly e. and w.), and passes on left two or three small villages ; road bears w., and 24 miles passes n. of Kuamabad amid vineyards and cultivation. Mountains on right sweep round, and road, bearing s.w. 27 miles, crosses to left bank of Poolwar ; road stony and undulating. 31 miles n. of Sivend, on left, on side of mountain, valley of Poolwar, well cultivated.

Sivend to Kinara (vâ Nakshi Râstum and Ruins of Persepolis), 20 m.

By good road along valley bearing s.e. ; cultivation along valley. Mountains on both sides, rocky and inaccessible. About 4 miles the village of Seidoon is seen on left (the post-road continues, and, passing through Seidoon, arrives at Kinara—distance called 5 fursuks). Leave road by small path on right, cross river, wind round base of rocky mountain, and then bearing w. and parallel with rocky range on right ; on left, a highly cultivated valley. Arrive 12 miles at Nakshi Rustum ; hence across valley, much cut up by canals and watercourses, bearing s. to Persepolis (ruins), distant some 5 miles (including great twistings of road). Persepolis to Kinara, across alluvial cultivated plain, distant 3 miles. Village of 200 houses. Water and provisions obtainable. E.N.E. two mountains with scarped rocky summits, Istakar and Shahruc, are seen.

Kinara to Zirgún, 3 h. r., 15 m.

By small path bearing n. of w. across cultivation. At distance of one mile strike into large road, and cross watercourse by small wood bridge ; road bears now s.w. To the right rear, distant some 8 or 9 miles, are the mountains Astakar and Shahruc, three separate mountains, with singularly scarped summits. They bear a little w. of n. from road : at their foot is seen the village of Futtawa. At the foot of Shahruc is small village of same name not visible. The whole of this Murdusht plain is alluvial. 7 miles, a brick bridge, with two lofty arches, is passed : this will soon be in ruin unless repairs are undertaken. The river is here some 30 yards wide, with rapid current : the people call it here Poolwar. The junction of the Poolwar and Bendamir (the latter coming from the n.w.) takes place some few miles above bridge. Arrived at the right bank, the road turns abruptly round base of rocky hill, which here completely commands both banks of river. Hence, the road crosses a perfectly level alluvial plain : in dry weather, road good ; in wet, would be impassable, owing to peculiar nature of soil. 12 miles, plain on both sides is marshy, and a rude stone causeway continues, with some two or three breaks, for about a mile across it. Road shortly after this winds round base of rocky hill, and, bearing s. along base of it, arrives at Zirgún, with cultivation. Good water and provisions.

Zirgún to Shiraz, 4½ h. r., 16½ m.

Road for 3 miles bearing s.w. across valley, then ascending and entering upon a hilly country, over which the road is bad, being covered with loose round stones. Pass at distance of 6½ miles a ruin ; on left from this a steep stony ascent commences, the summit of ridge being reached at distance of about 8 miles ; half a mile descent, and then cross a small smooth valley (in which many Eliaut tents were visible), about a mile broad. 9½ miles, ruined serai of Badjegah, with stream of water, and little cultivation. Immediately beyond this another steep ascent across ridge. Road, winding a good deal, though with a general bearing of s., passes some old ruins and stream of water at 14 miles. About 2 miles beyond this, road turns abruptly w., and enters narrow rocky gorge (of Allah-Hu-Ackbar) ; road cut in the rock of the right side of defile ; immediately below is Shiraz. At the foot of the gorge a large gateway is passed under.

The greater part of to-day's march is by an execrable road, covered with loose round rocks and stones. Two of the ascents and descents are, on this account, severe: to make the road passable for guns labour would be required. Just before reaching Shiraz defile much confined. The heights, in the hands of a resolute foe, would hold the pass against an army coming either way.

Shiraz to Khan-i-Zenian, 6 h. r., 26 m.

Leaving the town by the Bag-e-Shah gate, road bears w. through a highly cultivated country. Road bad, being covered with loose stones, and crossed every now and then by small streams: long lines of gardens are seen to the right at base of mountains about a mile from road. 4 miles is the village of Koshan (100 houses). The extensive gardens of Mesjid Verdah, some 400 in number, cover surface of plain to right, which here has a breadth of about 4 miles; a high scarped mountain on left, called Moollah Sirdeh. From Koshan, road ascends gradually, across stony plain, to Kinaradgah, a ruined serai, 8 miles from Shiraz. Here the mountains on either side close in, and road, crossing a mountain torrent by brick bridge, enters a hilly broken country. Constant ascent for about 2 hours: road stony and bad. The hills on both sides command the road in several places: they are well covered with bush and shrub. About 4 miles from Khan-i-Zenian, road approaches left bank of Kharabautch river, with broad jungly bed and fine stream of water, with many ascents and descents over a very broken country. The road, keeping along or near bank of river, arrives at Khan-i-Zenian, a ruined serai and small village of about a dozen houses, on the banks of a stream, a tributary of Kharabautch. Provisions scarce.

Khan-i-Zenian to Mean-e-Kotul, 6½ h. r., 23 m.

Road bears w. for 2 miles across plain of Zenian and then enters hills. 3½ miles, cross to right bank of Kharabautch river (fordable at all points at this season). For 1½ mile road keeps along bank; and in bed of river, on both sides of road, is thick jungle. Close on the left are low wooded hills. 6 miles, a ruined guard-house is passed. So far road is good, though in places stony. Here commences a very steep ascent, called the Seena Suffeed, which occupies rather more than a quarter of an hour. Road is broad, but covered with loose stones and shingle. Near the summit are some bad places; road leading over rocky masses. 7½ miles, another ruined guard-house. Rather less than 8 miles, small round tower on left marks the commencement of descent. This is a commanding spot, owing to height; but jungle is thick around it: 1½ mile gradual descent to a small open space. To the left, receding from road, is a singular scarped mountain; on the right are low hills. From this another short descent, and enter plain of Dust Arjun, for about a mile in a north-westerly direction across it. 12 miles, village of Dust Arjun, nearly all in ruins, under foot of mountain. A short distance beyond, from the base of a precipitous cliff, gush forth several springs of water (Shah-Sooltan), which, forming a considerable stream, flow across plain, and cause, some 2 or 3 miles distant, a marshy lake.

Mean-e-Kotul to Kazerun, 5½ h. r., 21 m.

Descent, by similar road to yesterday, continues for three-quarters of an hour. About 3 miles, road, bearing N.W., enters a small valley (Dusht-bear): trees here are fine, standing some distance apart, and with no undergrowth; for 5 miles along valley, greater part of which road is good, but over alluvial soil. About 7 miles, cultivation is seen on both sides of road, and continues for a mile. 8 miles, road, turning w. into narrow valley, passes covered well; for half a mile, with short descent, passing one or two houses. Just beyond these descent of the Kotul-e-doultre commences. The descent is rapid—I

should say 1 in 8 or 10 ; but the road is excellent. The road leads down the precipitous sides of a lofty mountain : the roadway, for the most part, is perfectly smooth, quicklime having been used in filling up and levelling the way after the stones had been laid down. A strong stone parapet, also finished with brick and lime, is continued for about 2 miles, the length of this roadway on left. So perpendicular is the mountain that a stone might be thrown from the summit on to any part of this way (this repair was effected in 1857). Continued descent (altogether from summit occupying about one hour) to base of scarped mountain on right, at foot of which is small building. 12 miles, here road enters plain of Kazerun, and, crossing a marshy stream by stone causeway and bridge, passes through an undulating cultivated plain. This stream, flowing to the left, forms a good-sized lake, called the Durrea Pereshoon, about 3 miles from road. Some said water was good, others affirmed it to be salt ; it had the appearance of fresh water. I could see no villages on its banks, nor cultivation. Rather more than 16 miles, square tower on left is passed, and a good stream of water from right crosses the road. Considerable cultivation around. Harvest here now just commencing.

The lake near the Nukhs-e-Timoor is called the Durrea Pereshoon : the water is brackish but drinkable.

It appears to me that the road, instead of scaling the highest and most precipitous mountain of the range, might have avoided, by going a little more to the s., the pass of the Kotul-e-Dokter.

Kazerun contains some 4000 inhabitants, of whom some 30 families are Jews. The governor is Mirza Mahmood Kazeronee. Provisions are abundant. Fine pastures in the valley. Town built of stone. Water-supplies principally from cannauts.

A road from Kazerun to Dusht Arjun, avoiding the Kotul Douhter and Pierzun, leaves plain by Tungu-Turkan pass, and, striking N.W., passes village of Nadoon half-way. This road called 12 fursuks ; the one by the pass 8.

Kazerun to Kumaridge, 5½ h. r., 19 m.

The plain around Kazerun is cultivated for some miles. Road bears n. n.w., and gradually approaches mountains on left. The plain has here a breadth of from 8 to 10 miles, is undulating, and thinly covered with jungle. 7 miles, pass small village of Dehrezz ; the greater part in ruin. Road beyond this becomes stony, and, turning w., passes round base of mountain on left. 9 miles, the village of Sadabad is passed about 1½ mile to right of road. Ruins of Shapoor are some 4 or 5 miles from this village in a direction N.N.E. About 12 miles, a guard and toll house is passed. The hills on right approach the road ; and the small valley presents a broken appearance of rocks and undulations. 14 miles, a ruined serai. Beyond this, slight ascent, and 1½ mile further on the road enters the narrow defile of Tunge-Toorkoon. The road through this for 1½ mile is excessively rugged and difficult : quite impracticable for guns or other wheeled carriage. Precipitous rocks rise immediately on both sides of road, and so continue till road debouches into well-cultivated plain of Kumaridge. About 4 miles w. across plain, Kumaridge, small village ; houses of stone. Water from wells ; some brackish. Forage abundant.

Kumaridge to Konar-Tukht, 3½ h. r., 12 m.

Road, bearing s., ascends and crosses some stony hills. Very soon after leaving village, about 1½ mile, arrives at bank of small stream, and enters with it a very narrow rugged defile ; road stony and difficult, crossing and recrossing stream : at one place it is built over by stone archway. 2 miles, a toll and guard house is passed. Beyond this commences the descent of Kotul and Kumaridge (lit. the pass of Kumaridge). Road difficult, narrow, and with short zigzags, between huge masses of rock and stone ; a horse only with

the greatest difficulty keeps his legs under him. For rather more than half an hour road is as bad as it can be, descending all the time. Scarped mountain sides and precipices rise abruptly from each side of road. A few determined men might here stop thousands. At 4 miles road is better, and gorge opens out. At 6 miles arrive on left bank of the Khoonazaberni, fine stream, some 30 yards wide : road follows along bank for about 2 miles, keeping also along base of mountains on left. 8 miles, the road, left to the right along the valley of river, proceeds to Kisht, distant some 4 miles. The left-hand road, turning s.w., crosses low spurs of mountains, and enters plain of Kisht (this plain is about 2000 feet above the level of the sea) and arrives at Konar-Tukht—serai and village of nomads. Villages adjacent supply provisions in abundance. Water in the wells here brackish ; for travellers, good water is brought from a spring some 2 miles distant.

Konar-Tukht to Dalakee, 4½ H. R., 14 M.

By good road across plain for 3 miles ; then suddenly commences the descent of the Kotul-e-Malu. Road, for three-quarters of an hour, very rugged and difficult. The zigzags over which road is taken are short. Large slippery masses of rock and stone are crossed. A brackish spring is passed half an hour from commencement of descent. On the right a lofty precipitous peak overhangs the road. At 5 miles, road, still descending, is somewhat better, and continues so till the right bank of the river is reached ; distance 7 miles : road continues along bank and in stony bed of rivers. 8½ miles, cross to left bank ; ford stony, about 25 yards wide. Water at this season (June) up to horses' bellies ; owing to strong current, this in winter is a dangerous ford : both men and cattle have been lost in crossing at that season. Road passes complete ruins of two old bridges, about 2 miles asunder. 10 miles, road leaves valley of river, and, turning left, enters a confined rugged gorge, through which it lies, by a very stony bad road for 3 miles, then, descending spurs of mountains, enters the plains lying along border of Persian Gulf. Dalaki, some 70 or 80 houses ; cultivation. River of Rohilla distant 1 mile, water of which is brackish. Along banks are large date-groves.

Dalaki to Búrasjún, 3½ H. R., 14 M.

Road bears s.s.e. parallel to base of mountains, which are some 2 or 3 miles to the left. The plain is thinly covered with shrub and bush. On the right there is a considerable extent of marshy ground, caused by naphtha springs. The air, for some 2 miles after leaving village, was strongly impregnated with smell of naphtha. Two streams impregnated with this mineral cross the road. At distance of 9 miles road turns away from mountains, and, bearing s.w., crosses an undulating country with low hills, the hollows of which are thinly wooded. Road, generally speaking, good, though in some places stony ; soil mostly alluvial. Passing for about 4 miles over this sort of country, road approaches Búrasjún, the last mile being across level plain. To the s.w. and s. are large date-groves, distant some 2 miles. This is a walled town, with a considerable collection of houses outside the ruined defences of town. Provisions are abundant. Water is good from wells within the town.

Búrasjún to Chagudduk, or Ali-changi, 4¾ H. R., 22 M.

Road bears s.w. across a perfectly level alluvial plain. Shortly after leaving village, road passes through, for some hundred yards, large date-groves. Kooshab, a small village on the right, is passed at 5 miles. Water brackish. Erawundi is passed on left, a little off the road at 11 miles ; a tolerable sized village. 17 miles, Amdui on the right of road ; date-groves and well of brackish water on left. Road hence over a dead level plain, on which neither tree nor grove is visible for miles around.





Ali-changi or Chagudduk to Bushire, 4 h.r., 16 m.

Road across a salt swampy marsh. The road-track is firm in fine weather, and makes a long sweep to the s. On the right is an arm of the sea.

C. CLERK, F.R.G.S.,
Lieut. 2nd Madras Cavalry.

May 1st, 1859.

V.—*Journal of Australian Exploration.* By MR. JOHN M'DOULL
STUART, Gold Medallist, F.R.G.S.

Read, March 12, 1860.

Friday, April 22, 1859.—Went to the top of Mount Hermit, and obtained the following bearings :—Mount Reynolds, 84° ; north-east point of North Lake Torrens, 28° ; the centre of ditto, 335° ; the small island, the nearest point to this hill, $344^{\circ} 15'$; south-west of lake, 291° ; Major Warburton's cone of stones, $197^{\circ} 30'$; $\frac{1}{2}$ mile north, $115^{\circ} 45'$; camp, 5° ; latitude, $29^{\circ} 32' 34''$. Sun's alt. $26^{\circ} 25' 45''$; index error, $1^{\circ} 30'$. The view from the top of Hermit Hill is very extensive from north-west to north-east of North Lake Torrens. I could see all round it; it is surrounded by low hills, and in the far distance there seems to be rising ground. To the south are broken hills, the termination of the Mount North-West range; that part of the country I shall examine to-morrow. Between this and the lake to the north the country is very rough; broken cliffs, with sand; the good country does not extend beyond 3 miles. Beyond this the lake is 7 miles distant; the springs are very numerous all round this mount, and seem to drain into the lake; they are round the hills from west to south; they give out an immense quantity of water, and there are many streams of water running from them. Round about the spring the ground is covered with a cake of soda and saltpetre; not salt, as many would take it to be. This mount is Mr. Babbage's Hermit Hill. It is my opinion there are more springs to the south, which induces me to search to-morrow before going to Chambers Creek. The little hills about it are visible from this. I intended to have moved on to Gregory Creek this afternoon, but took the precaution to send my stockman to examine it, in order to see what state the water was in. My reason for not going on at once to Chambers Creek is that it will be too far to examine the country between this and South Lake Torrens. My stockman has returned, and reports the water in the creek to be quite salt, and many of the small fishes dead. He also found some fossil shells, the mussel oyster; they have now become a solid limestone; they were found in a large circular piece of limestone, and very perfect.

Saturday, April 23.—Started at 8 A.M., with Hergott, to examine the country south of this, towards a high conical hill at the north-west point of the range. The country between this and the range is very good; in some places it is a little rotten, and a little stony; but the range is a beautiful grass country to the very top. In the creeks the grass and other plants are growing luxuriantly, but we could find no water. I was unable to prosecute the search as far as I wished, in consequence of my horse having lost a shoe and becoming quite lame, which forced me to return to the camp, where we arrived at 9 P.M. The view from the Conical Hill is very extensive, except to the south, which is limited. We saw smoke in one of the creeks to the east. I was anxious to examine the creek to the south-west, which we saw from the top of the Conical Hill; I therefore did not go to where the smoke rose, thinking that the blacks might only be hunting; I crossed the hills over